

Heavy-Duty Vehicle Greenhouse Gas (GHG) Emission Reduction Regulation



California Environmental Protection Agency
 Air Resources Board

Presentation Overview

- **Purpose**
- **Status of regulation**
- **Applicability**
- **Requirements**
- **Optional phase-in plans**
- **Current technologies**
- **Exemptions and provisions**
- **Enforcement**
- **Frequently asked questions**
- **Funding assistance**

Purpose - Reduce GHG Emissions by Improving:

- Tractor aerodynamics
 - Streamlined hood, sleeper cab roof fairings, gap fairings, fuel tank fairings, aerodynamic bumper and mirrors
- Trailer aerodynamics
 - Side skirts, front gap fairings, rear trailer fairings
- Tire rolling resistance
 - low rolling resistance tires (LRR)

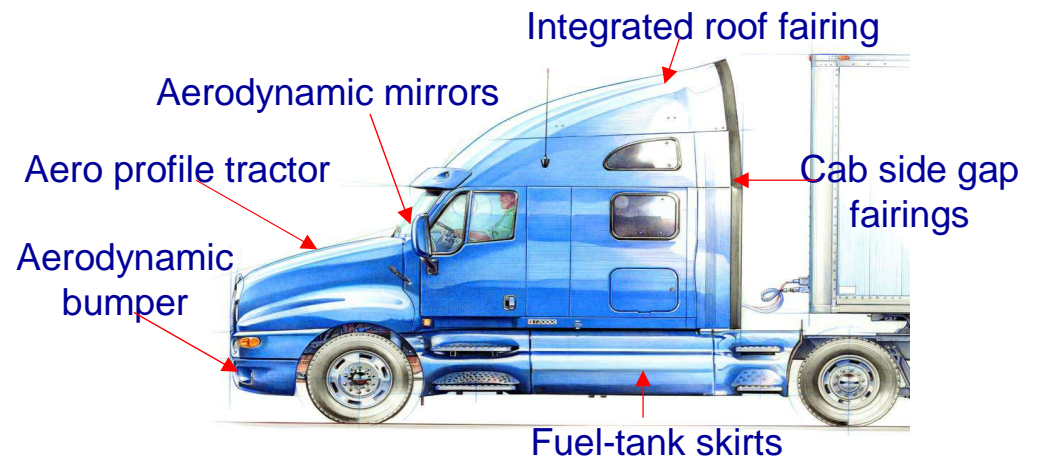
Front Trailer Gap Fairings



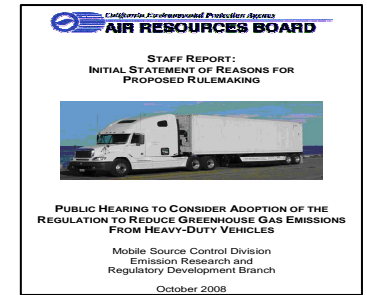
Side Skirts



LRR Tires



Status of Regulation



- Approved by the Office of Administrative Law (OAL) December 9, 2009
- Codified into California Code of Regulations (CCR) subarticle 1, sections 95300 to 95311, title 17
- In effect January 1, 2010

Applicability

- Tractors pulling 53' or longer box-type trailers
- 53' or longer box-type trailers (dry-van & refrigerated-van trailers)
- Responsible for compliance: owner, driver, motor carrier, California-based broker, and California-based shipper
- All owners operating affected vehicles in California regardless of where their vehicle is registered

Definition of Owner

The “Owner” is the person registered as the owner by the DMV, except in the following situations:

Situation	Owner
Tractor/trailer under third-party maintenance contract	Person contracted to maintain/install aero/LRR tires
Tractor/trailer owned by Federal government (not registered by DMV)	Federal Government
Leased tractor	Lessee: If lease or contract includes disclosure, otherwise lessor
Leased trailer	Lessee: If lease or contract includes disclosure and allows modification/exchange of trailer for pre 1/1/2013 leases, otherwise lessor is owner

What the Rule Requires

- Requirements for new and existing tractors
 - Aerodynamic equipment and LRR tires on new
 - LRR tires on existing
- Requirements for new and existing trailers
 - Aerodynamic equipment and LRR tires on both new and existing

What the Rule Requires (continued)

- Equipment requirements based on U.S. EPA SmartWay certification/verification
- Registration of trailers for the optional extended phase-in plan for fleets
- Registration of local-haul and short-haul tractors and trailers to apply for exemption
- Must register in ARB's web based database system

Tractor Requirements



New tractor purchases:

- 2011+ model year (MY) sleeper-cab tractors
 - SmartWay certified tractor (*aerodynamics and LRR tires*)
 - **January 1, 2010**
- 2011+ MY day-cab tractors
 - SmartWay verified LRR tires (*tires only*)
 - **January 1, 2010**

Existing tractors:

- All 2010 and older MY sleeper-cab and day-cab tractors
 - SmartWay verified LRR tires (*tires only*)
 - **Compliance by January 1, 2012**

Trailer Requirements



New trailer purchases:

- 2011+ MY 53-foot or longer box-type trailer
 - SmartWay certified *or*
 - Retrofitted with SmartWay technologies:
 - LRR tires* *and*
 - Aerodynamic devices*
 - Select one or more devices that add up to the percent improvement target
 - Minimum of 5% fuel efficiency improvement for a dry van
 - Minimum of 4% fuel efficiency improvement for a refrigerated van
 - **Compliance by January 1, 2010**

*Based on U.S. EPA SmartWay certified/verified technologies

Trailer Requirements (continued)



Existing trailers:

- 2010 and older MY 53-foot or longer box-type trailers
 - Same requirements as 2011+ MY trailers (*aerodynamics and tires*)
 - Compliance by **January 1, 2013**; *or*
 - Participate in an optional phase-in plan:
 - Small fleet compliance plan
 - Large fleet compliance plan

Optional Small Fleet Compliance Plan



- Small fleet – 20 or fewer trailers
- Phase-in: 2013 – 2016
- Submit compliance plan by **July 1, 2012**
- May elect to participate in large fleet compliance plan

Percentage of trailers	Compliance before
25%	January 1, 2014
50%	January 1, 2015
75%	January 1, 2016
100%	January 1, 2017

Optional Large Fleet Compliance Plan



- Large fleet – 21 or more trailers
- Phase-in: 2010 – 2015
- Early compliance option
- Submit compliance plan by **July 1, 2010**

Percentage of trailers	Compliance before
5%	January 1, 2011
15%	January 1, 2012
30%	January 1, 2013
50%	January 1, 2014
75%	January 1, 2015
100%	January 1, 2016

Delayed Compliance for Some Refrigerated Vans

- Applicable to 2003 - 2008 MY reefer trailers with 2003 or newer TRUs
- **No reporting** required for these trailers

Trailer model year	Compliance before
2003-2004	January 1, 2018
2005-2006	January 1, 2019
2007-2008	January 1, 2020

Optional Trailer Fleet Compliance Plan Reporting

- **Fleet information submitted in the plan:**
 - Trailer fleet list
 - Large Fleet includes only California operated
 - Small Fleet includes total trailer fleet
 - Specific information for each trailer
 - Identification of trailers to be bought into compliance each year to meet the fleet phase-in plan
- **General requirements:**
 - Provide all required information to ARB by due dates
 - Ensure designated trailers meet compliance schedule
 - Allow ARB to audit records and equipment
 - Maintain all documentation at location specified on trailer fleet list



New SmartWay Certified Tractors

Currently Available

- Fully aerodynamic with LRR tires
- Purchase directly from tractor manufacturer/dealer
- Smartway certified tractor list located on U.S. EPA website
- SmartWay program website:
<http://epa.gov/smartway/transport/what-smartway/verified-technologies.htm>



New SmartWay Certified Dry-van Trailers Currently Available

- Aerodynamics and LRR tires
- Refrigerated-van certification coming soon
- Purchased directly from trailer manufacturer/dealer
- SmartWay aerodynamic equipment list located on U.S. EPA website
- SmartWay program website:
http://epa.gov/smartway/transport/what-smartway/verified_technologies.htm



SmartWay Verified Aerodynamic Technologies

- Retrofit technologies
- Technologies: front fairings, rear fairings and side skirts
- Purchased directly from trailer manufacturer/dealer
- SmartWay retrofit technologies equipment
- SmartWay program website:
<http://epa.gov/smartway/transport/what-smartway/verified-technologies.htm>



SmartWay Certified LRR Tires

- Dual or single wide tires
- Purchased directly from tire manufacturer/dealer
- Retread tires exempt if SmartWay verified casings are used
- SmartWay program website:
<http://epa.gov/smartway/transport/what-smartway/verified-technologies.htm#tires>



Short-Haul Exemption

- **Tractors only**
 - 50K miles or less per year
 - Exempted from both the aerodynamic and LRR tires
 - Must register vehicle with annual updates on mileage to ARB

Local-Haul Exemption

- **Tractors and trailers**
 - Operation restricted to within a 100-mile radius of registered home base
 - Exemption from aerodynamic requirement only
(LRR tires required)
 - Must register vehicle and home base information with ARB prior to operation

Exempt Tractors and Trailers

- Drayage tractors & trailers
 - Operate within a 100 mile radius of port or intermodal rail yard
- Container-chassis trailers
- Drop-frame van trailers
- Curtain-side van trailers
- Emergency vehicles
- Solid waste vehicles
- Military vehicles



Enforcement to Ensure Equity

- Expand existing inspection efforts
 - Weigh stations, random roadside and fleet
- Web-based database for tracking vehicle records
- Crosscheck with other regulatory programs
- Fleet record audits

CARB Enforcement Strategy for Shippers and Brokers

California shippers and brokers:

- Notified when a notice of violation (NOV) has been issued to a non-compliant tractors-trailers transporting their goods
- May be subject to NOV if no proactive steps taken with ARB, owners, and/or motor carriers to ensure goods are shipped in compliant tractors and trailers, and
- Shipper continues to load freight onto non-compliant trailers owned/dispatched by delinquent owners/motor carriers

FAQ:

What if I decide not to participate in the Optional Phase-In Plan?

- Follow compliance timelines identified in the regulation for affected tractors and trailers and ensure all trailers are in compliance by January 1, 2013

FAQ:

What vehicles in my fleet do I need to register in order to comply with the phase-in schedule?

- Small fleet
 - Register all vehicles that operate in California and outside of California
- Large fleet
 - Register only vehicles that operate in California

FAQ:

If I do not participate in the optional phase-in plans, what other vehicles in my fleet do I need to register in order to comply with this regulation?

- Exempt short-haul tractors
- Exempt local-haul tractors
- Exempt local-haul trailers

FAQ:

What information do I need in order to register my short-haul tractor?

- Statement of intent
- Tractor information
- Odometer reading
- Contact person
- Owner/corporate information
- Motor carrier information

FAQ:

What information do I need in order to register my local-haul tractor/trailer?

- Statement of intent
- Tractor/trailer information
- Contact person
- Owner/corporate information
- Motor carrier information

Tractor and Trailer Information Required

- Make
- Model
- Model year
- Vehicle identification number (VIN)
- Country, state or province of registration
- Registration type
- License plate number

FAQ:

What information do I need in order to register my vehicles in the Small Fleet Phase-in Plan?

- Statement of intent
- Trailer fleet list (including trailers that do not travel in California)
- Trailer information
- Exempt trailers/tractors information
- Phase-in plan (2013-2016)

FAQ:

What information do I need in order to register my vehicles in the Large Fleet Phase-in Plan?

- Statement of intent
- Trailer fleet list (include only trailers that travel in California)
- Trailer information
- Exempt trailers/tractors information
- Phase-in plan (2010-2016)
- Early compliance trailers (if applicable)

Funding Assistance to Help Comply with the Greenhouse Gas Regulation

- Loans range between \$5,000 and \$1.5 million
 - Purchase of 2011 or newer SmartWay certified heavy-duty trucks
 - SmartWay approved aerodynamic technologies
 - CalCAP participating financial institutions:
www.treasurer.ca.gov/cpcfa/calcap.asp
 - Cascade Sierra Solutions:
<https://secure.cascadesierrasolutions.org/>

For More Information...

On-Road Heavy Duty Diesel Section

DIESEL HOTLINE:

- (866) 6-DIESEL (866-634-3735)
- Email: 8666diesel@arb.ca.gov

the TRUCK STOP web address:

<http://www.arb.ca.gov/msprog/truckstop/truckstop.htm>

Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Regulation

Web address: <http://www.arb.ca.gov/cc/hdghg/hdghg.htm>

Listserv: <http://www.arb.ca.gov/listserv/hdghg.htm>

SmartWay program information: <http://epa.gov/smartway/>